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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/728,535	12/01/2000	Jae Chang Jung	000939-078800US	5110

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EXAMINER
HAMILTON, CYNTHIA

ART UNIT	PAPER NUMBER
1752	14

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/728,535	JUNG ET AL.	
	Examiner	Art Unit	
	Cynthia Hamilton	1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4-4-03, 5/20/03* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) *14-21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-21* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *11,13* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 9 and 12-13 are rejected under 35 U.S.C. 102(a) as being anticipated by Jung et al (Polymer published September 2000 as set forth in the Journal table of contents front page). Jung et al is a different inventive entity than the instant application even though one name may be in common, i.e. J.C. Jung and Jae Chang Jung. The publication date is given as September 2000 for the Polymer article which is before the volume date of January 2001 which is before the filing date of the application which is December 1, 2000. The overcoat compositions of Jung et al are poly acrylic acid co methyl acrylate and mixed with L-proline as an amine, i.e. a basic compound, and water is the solvent. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15. Applicants have submitted " a true and correct translation of the Priority Document (No. KR 1999-54365) in the Korean language already filed with the Korean Industrial Property Office on December 2, 1999" which is the STATUTORY DECLARATION signed by Jun Hee Park on May 12, 2003 and submitted by applicants on May 22, 2003. The required statement to be made according to 37 CFR 1.55 is "translation of the certified copy is accurate". Since the attached English translation appears to be missing page 18-1 to 18-3 of the certified copy of said priority document in this application

file and the Abstract is at the back of the translation instead of in front as would be assumed if page 18-4 is the Abstract page, the examiner questions whether the document translated by Mr. Jun Hee Park was the same as the certified copy submitted December 01, 2000 to the Patent and Trademark Office. The pertinent part of 37 CFR 1.55 is as follows:

> (4) An English language translation of a non-English language foreign application is not required except when the application is involved in an interference (§ 1.630), when necessary to overcome the date of a reference relied upon by the examiner, or when specifically required by the examiner. If an English language translation is required, it must be filed together with a statement that the translation of the certified copy is accurate.

For these reasons, the examiner holds applicants have not satisfied 37 CFR 1.55.

3. Applicant's arguments filed May 30, 2003 have been fully considered but they are not persuasive. Applicants argue the examiner has failed to support her allegation that the publication date of the Jung et al reference is September 2000. The examiner sends a copy of the front pages of the Polymer issue in question wherein the Jung article is listed at 161 and on the top of the page is found "volume 42 number 1 (January) 2001 (published September 2000)" and she sends a copy of the online page for the same issue found on the internet at www.sciencedirect.com. This page states for the article in question "Available online 7 September 2000." From MPEP 2128 is found:

An electronic publication, including an on-line database or Internet publication, is considered to be a "printed publication" within the meaning of 35 U.S.C. 102(a) and (b) provided the publication was accessible to persons concerned with the art to which the document relates. See In re Wyer, 655 F.2d 221, 227, 210 USPQ 790, 795 (CCPA 1981) ("Accordingly, whether information is printed, handwritten, or on microfilm or a magnetic disc or tape, etc., the one who wishes to characterize the

information, in whatever form it may be, as a printed publication' * * * should produce sufficient proof of its dissemination or that it has otherwise been available and accessible to persons concerned with the art to which the document relates and thus most likely to avail themselves of its contents.' " (citations omitted).). See also Amazon.com v. Barnesandnoble.com, 73 F. Supp. 2d 1228, 53 USPQ2d 1115, 1119 (W.D. Wash. 1999) (Pages from a website were relied on by defendants as an anticipatory reference (to no avail), however status of the reference as prior art was not challenged.); In re Epstein, 32 F.3d 1559, 31 USPQ2d 1817 (Fed. Cir. 1994) (Database printouts of abstracts which were not themselves prior art publications were properly relied as providing evidence that the software products referenced therein were "first installed" or "released" more than one year prior to applicant's filing date.).

The examiner however also notes the following:

A publication disseminated by mail is not prior art until it is received by at least one member of the public. Thus, a magazine or technical journal is effective as of its date of publication (date when first person receives it) not the date it was mailed or sent to the publisher. In re Schlittler, 234 F.2d 882, 110 USPQ 304 (CCPA 1956).

Thus, the issue as to whether the publication date is a valid date could be debated but the availability on September 7, 2000 of the online copy of this document is considered sufficient evidence that the "printed publication" date is September 7, 2000 for Jung et al.

4. Claims 1-2, 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Tomihari et al (PTO 03-215 which is an English translation of Tomihari et al (JP 02-263811) optionally further evidenced by Morpholine (Environmental Health Criteria 179, 1996). The instant compositions of claims 1-12 are required to be comprised of a an over-coating resin derived from a mixture of acrylic acid, and alkyl acrylate, a solvent and a basic compound. With respect to instant claims 1, 2 and 5-8, the working examples 1-2 of Tomihari et al as set forth in PTO 03-215 anticipate the instant composition wherein the basic compound used is ammonia in Working Example 1 and morpholine in Working Example 2. The basic compound is used to derive the coating composition of Tomihari et al and morpholine as evidenced by Morpholine on page 20

has a pKa (conjugated acid) of 8.33 at 25 degrees C thus meeting the limits of instant claim 4 and the examiner notes that a certain portion of morpholine would remain even after neutralization in the composition of Tomihari et al. However, the examiner notes that the claim language states the instant composition is derived from the components set forth, therefore the use of a base to form the composition is sufficient to meet the claim requirements.

5. Claims 1-2, 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomihari et al (PTO 03-215 which is an English translation of Tomihari et al (JP 02-263811). The instant compositions of claims 1-12 are required to be comprised of a an over-coating resin derived from a mixture of acrylic acid, and alkyl acrylate, a solvent and a basic compound. The compositions of Tomihari et al teach the instant compositions wherein the not preferred amine is triethanol amine used is set forth on the top of page 8. The copolymers used are generically disclosed as copolymers of (a) an alpha, beta-monoethylenic unsaturated acid and (b) an ester of acrylic acid or methacrylic acid as taught on page 5. On page 6, said ester is described as a saturated aliphatic monhydric alcohol ester thus an alkyl ester. Thus, all of the esters of Tomihari are the alkyl esters required by the instant invention. Said acids are inclusive of acrylic acid among six listed on page 5. However, the working examples are all drawn to acrylic acid copolymers. Tomihari et al have no working examples using acrylic acid and alkyl acrylates with triethanol amine as the amine. However, with respect to instant claims 1-2, and 4-11, the use of the acrylic acid and alkyl acrylates in the working examples as the only examples of copolymers actually given in the Tomihari et al reference makes their use obvious with the less preferred listed triethanol amine to obtain a water resistant coating as desired by Tomihari as taught on page 3 wherein their invention is directed to forming a composition or aqueous

protection suitable for preventing primary corrosion of coated or plated surfaces. The examiner notes for the record that an obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use. See particularly In re Gurley, 27 F.3d 551, 554, 31 USPQ2d 1130 (Fed.Cir. 1994). The examiner notes that claim 10 is included in this rejection only because the choice of amine in claim 9 is not limited to the tetraalkylammonium hydroxide salts. Thus, the limits of claim 10 do not apply to the choice of tri(hydroxyalkyl) amines. If claim 10 were written to limit the amine compound given in claim 9 to the list given in claim 10 then claim 10 would not have been included in this rejection.

6. Applicant's arguments filed May 22, 2003 have been fully considered but they are not persuasive.

Applicants argue that their preamble "over-coating composition for coating a photoresist composition to provide a vertical photoresist pattern" used in claims this application "inherently provides physical limitations that the amount of basic compound in compositions of the present invention must be sufficient enough such that an excess amount of the basic compound is present relative to the amount of acrylic acid in the over-coating composition" and as alleged by applicants " Since volatility and the amount of basic compound used are different, it is submitted that the compositions of the present invention are inherently different from the compositions discussed in the Tomihari et al reference." For this reason the rejections under 35 USC 102 (b) in view of Tomihari et al (PTO 03-215 which is an English translation of Tomihari et al (JP 02-263811) optionally further evidenced by Morpholine (Environmental Health Criteria 179, 1996) and under 35 USC 103 (a) in view of Tomihari et al (PTO 03-215 which is an English translation

of Tomihari et al (JP 02-263811) should be removed. Applicants further argue that Tomihari et al does not teach or suggest one skilled in the art to use the basic compounds (or the ratio of basic compound to acid component) of the present invention because 'Tomihari et al explicitly stated that the use of alkali compounds having a low volatility is not desirable. Further Tomihari et al. explicitly states it "is necessary for the amount of the volatile alkali added to be an amount corresponding to the amount that is needed for neutralization of the acid component in the ... polymer.' "

The examiner notes that there are two general questions here. First does the preamble of the instant claims acts to limit the claimed invention as alleged? Second, is if it does then does Tomihari et al teach compositions within those limits?

With respect to the preamble "An over-coating composition for coating a photoresist composition to provide a vertical photoresist pattern", the "for coating a photoresist composition to provide a vertical photoresist pattern" is a statement of intended use or purpose of the "over-coating composition". During examination according to MPEP 2111.02, this purpose or intended use must be evaluated to determine whether the recited purpose or intended use results in a structural difference between the claimed invention and the prior art. Is the preamble a mere statement of purpose or is the preamble a recitation of structural limitations that act to limit the composition beyond "comprising an over-coating resin derived from a mixture of acrylic acid and an alkyl acrylate, a solvent, and a basic compound". This "can be resolved only on review of the entirety of the [record] to gain an understanding of what the inventors actually invented and intended to encompass by the claim." Corning Glass Works, 868, F2d at 1257, 9 USPQ2d at 1966. ***The examiner believes the evidence of the record supports this preamble to be only a***

statement of intended use and as such it does not add any structure to the claimed invention. The over-coating composition to be "for coating a photoresist composition to provide a vertical photoresist pattern" only be useful for that purpose. There is no limitation that more basic compound could not be added to make the over-coating composition better for its intended purpose. There is no explicit reference for the need of a non volatile basic compound in the instant application. There is no requirement that a basic compound be present in the over-coating composition only that it be "derived" from such if the composition only comprises a resin from which it is derived. That the over-coating composition could be made from a copolymer that was the product of neutralizing a copolymer of acrylic acid/alkyl acrylate in a volatile solvent with an amine as set forth by Tomihari et al and still be an over-coating composition that would be capable of being used with further addition of components such as more or different basic compounds to be "for coating a photoresist composition to provide a vertical photoresist pattern" is clearly possible. Applicants do not bind themselves with theory as to how their overcoat functions. Further, there is no disclosure in the original specification that requires the basic compound be present in such quantities that it is more than would be present to only neutralize the acid groups in the polymer present. On the top of page 8 of the specification, applicants refer to the possibility that the over-coating composition may act as a barrier and a buffer to prevent the acid generated at the exposed area from being neutralized by the environmental amine compounds during PED. Thus, the record is not clear that basic compound that is part of a neutralized polymer as a salt as set forth by Tomihari et al as preferred, is not part of the original disclosure and not part of the original meaning of basic compound. There is no requirement that the over-coating composition be in its proper composition for immediate use.

There is no clear understanding that the over-coating composition had more base in it than would be used up to neutralize the polymer in it. Thus, the examiner is not persuaded that "for coating a photoresist composition to provide a vertical photoresist pattern" is any more limiting than intended future use and that the original specification sets up limits in the composition beyond that of being able to use the composition at some time after its formation as an overcoat composition "for coating a photoresist composition to provide a vertical photoresist pattern". Applicants have not pointed to any part of the composition of Tomihari et al that would not allow that to happen. Applicants have not shown evidence that the bases of Tomihari et al would not act as required in the instant application. Applicants argue that for their composition to work that an excess of basic compound relative to the amount of acrylic acid used. This is not a claim limitation nor it is found in the specification as originally filed. Applicant argue volatility and amount of basic compound are different from Tomihari et al. No such limits are present in the claim language under rejection. Instant claim 7 clearly includes ammonia, i.e. all R's are H and this is cited by Tomihari et al. Thus, the examiner believes she has examined the claims with the broadest reasonable interpretation of the claim language. As to Tomihari et al disclosing that some of their layers are less desirable than others because water resistance is reduced does not remove from the art that those layers obviously considered and tried and as such are obvious compositions in the art. The rejections stand.

7. Claims 14-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected group, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Papers No. 5 and 7.

8. Because of the citation of evidence to support the examiner's statement that the Jung et al has a publication date of September 2000, this action is not made final. The examiner believed she had sent such evidence but found no record of it with the last Office Action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jung et al (2003/0108815 A1) is the published application of applicant cited US 10/174,497.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner Cynthia Hamilton whose telephone number is (703) 308-3626. The examiner can normally be reached on Monday-Friday, 9:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on (703) 308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of papers not received regarding this communication or earlier communications, or of a general nature or relating to the status of this application or proceeding should be directed should be directed to the Customer Service Center of Technology Center 1700 whose telephone number is (703) 306-5665.

Cynthia Hamilton
August 7, 2003

CYNTHIA HAMILTON
PRIMARY EXAMINER